CHAPTER IV

MITIGATION MONITORING AND REPORTING PLAN

INTRODUCTION

When approving projects with Environmental Impact Reports (MNDs) or Mitigated Negative Declarations (MND) that identify significant impacts, the California Environmental Quality Act (CEQA) requires public agencies to adopt monitoring and reporting programs or conditions of project approval to mitigate or avoid the identified significant effects (Public Resources Code §21081.6(a)(1)). A public agency adopting measures to mitigate or avoid the significant impacts of a proposed project is required to ensure that the measures are fully enforceable, through permit conditions, agreements, or other means (Public Resources Code §21081.6(b)). The mitigation measures required by a public agency to reduce or avoid significant project impacts not incorporated into the design or program for the project, may be made conditions of project approval as set forth in a Mitigation Monitoring and Reporting Program (MMRP). The program must be designed to ensure project compliance with mitigation measures during project implementation.

The MMRP includes the mitigation measures identified in the MND required to address only the significant impacts associated with the project being approved. The required mitigation measures are summarized in this program; the full text of the impact analysis and mitigation measures is presented in the Final MND and/or in the Response to Comments Final MND document.

FORMAT

The MMRP is organized in a table format, keyed to each significant impact and each MND mitigation measure. Only mitigation measures adopted to address significant impacts are included in this program. Each mitigation measure is set out in full, followed by a tabular summary of monitoring requirements. The column headings in the tables are defined as follows:

- Mitigation Measure: This column presents the mitigation measure identified in the MND.
- **Implementation Actions:** This column provides additional information on how the mitigation measures will be implemented.
- **Monitoring and Reporting Requirement:** This column contains an outline of the appropriate steps to verify compliance with the mitigation measure.
- **Monitoring Schedule:** The general schedule for conducting each monitoring and reporting task, identifying where appropriate both the timing and the frequency of the action.

ENFORCEMENT

The MMRP will be incorporated as a condition of project approval. Therefore, all mitigation measures for significant impacts must be carried out in order to fulfill the requirements of approval. A number of the mitigation measures will be implemented during the course of the development review process. These measures will be checked on plans, in reports, and in the field prior to construction. Most of the remaining mitigation measures will be implemented during the construction, or project implementation phase.

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
Aesthetics				
No significant impacts anticipated for aesthetics.				
Agricultural Resources				
No significant impacts anticipated for agricultural resources.				
Air Quality				
AQ-1: Construction and demolition activities associated with facility construction would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions.	AQ-1: The following measures proscribed by BAAQMD shall be implemented to ensure that construction impacts are less than significant.			
	All construction personnel working on the project shall be trained prior to starting construction on methods for minimizing air quality impacts during construction.	PG&E and/or its contractor(s) to implement measure as defined in coordination with BAAQMD to determine the most up-to-date best management practices for minimization of air quality impacts during construction	A. PG&E and/or its contractor(s) to submit a description of the training, including a list of the best management practices proposed for the project. B. PG&E shall submit copies of sign-in sheets from the training session(s) to CPUC to verify compliance	A. Prior to and during all phases of construction B. During all phases of construction
	Construction areas, unpaved access roads, and staging areas shall be watered at least twice daily during dry weather, or soil stabilizers shall be applied during active work.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	Trucks hauling soil and other loose material shall either be covered, have at least two feet of freeboard, or be sprayed with water prior to arriving and departing from the construction site.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	Paved access roads, parking areas, and staging areas at construction sites and streets shall be cleaned daily with water sweepers if excessive soil material is carried onto adjacent public streets.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	• Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	Replant vegetation in disturbed areas as quickly as possible after project completion, taking into account optimal season and survival rates.	PG&E and/or its contractor(s) to coordinate a preconstruction "walk through" with the CPUC to agree where the revegetation will take place prior to disturbance. Photos should be submitted to CPUC immediately after vegetation has been replanted and again in 6 months to assure survival.	CPUC to participate in the walk through and review photographs to determine whether or not revegetation is acceptable. If not, CPUC shall review revegetation plan with PG&E and require additional revegetation activities to occur	Prior to construction, after disturbance, and 6 months after replanting to assure survival (taking into account optimal season and survival rates).
	Construction vehicles shall use paved roads to access the construction site wherever possible.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	Vehicle speeds shall be limited to 15 mph or less on unpaved roads and construction areas.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	A carpooling strategy shall be implemented for construction workers prior to commencing construction (during construction worker orientation and training). This strategy shall be submitted to and approved by the CPUC prior to commencement of project construction.	PG&E and/or its contractor(s) to prepare and submit a carpooling strategy to the CPUC	CPUC to review and approve submitted carpooling strategy; CPUC mitigation monitor to inspect compliance with carpooling strategy at least once weekly	One week prior to start of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	Construction vehicles shall be properly tuned per the manufacturers' recommended maintenance schedule, if reasonably available. This applies to vehicles used for construction activities only, and does not apply to commuter vehicles.	If PG&E and/or its contractor(s) does not have the manufacturers' recommended maintenance schedule for a construction vehicle, PG&E must use reasonable effort to assure construction vehicle is properly maintained. A proposed schedule of construction vehicle maintenance shall be submitted to the CPUC for approval.	CPUC to review and approve submitted maintenance plan, which is to include implementation method (i.e. manufacturer's recommended maintenance, PG&E managed maintenance, etc.) and schedule.	One week prior and during construction if equipment type changes.
	Vehicle idling time shall be minimized to 10 minutes whenever possible.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	Install sandbags or other erosion control measures to prevent silt runoff to public roadways.		CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	Suspend excavation and grading activity when dust control mitigation measures become ineffective due to excessive winds.		CPUC mitigation monitor to inspect compliance at least once weekly	During times of construction affected by excessive winds
	Designate at least one person to monitor the dust control program and order increased watering, as necessary, to prevent transport of dust offsite. The name and telephone number of such persons shall be provided to the BAAQMD prior to the start of construction.	implement measure as defined	PG&E to submit name and telephone number of monitor(s) to BAAQMD and the CPUC	One week prior to start / during construction (if information changes)
AQ-2: Project construction could result in the release of toxic air contaminant (TAC) emissions during disturbance of contaminated soils and/or serpentine rocks.	AQ-2: In addition to implementation of Mitigation Measure AQ-1, the following measures prescribed by BAAQMD shall be implemented to ensure that TAC emissions from construction activities would be less than significant			
	Notification to BAAQMD of construction activities, such as grading operations, when the activity occurs in areas where ultramafic and serpentine rock or naturally-occurring asbestos may be found, shall be required.	PG&E and/or its contractor(s) to implement measure as defined	PG&E to submit report to BAAQMD and the CPUC defining the geological setting of the area and the type of construction activity to occur	Two weeks prior to construction for known areas; during construction for unknown areas

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	Ensure that construction operations do not result in visible emissions crossing the project boundaries in areas where hazardous waste or serpentine rocks exist.	A. PG&E and/or its contractor(s) to assure no visible emissions cross the property line. This will be assured by implementation of Mitigation Measure HAZ-1b, which requires excavated material with known hazards to be placed on plastic sheeting, moistened to control dust, and covered in a manner to prevent runoff of turbid or contaminated stormwater. This Measure also required soil sampling and analysis for specific inorganic and organic chemicals per the Maher's Ordinance.	A. CPUC mitigation monitor to inspect compliance at least once weekly	A. Prior to and during construction in areas containing known hazardous waste (including asbestos containing material) and/or serpentine rocks.
		B. PG&E and/or its contractor(s) to stop construction and determine best mitigation method to assure no visible emissions cross project boundary upon discovery of new hazardous waste (including asbestoscontaining material) and/or serpentine rocks.	B. PG&E to provide written and verbal notification to the CPUC of any discoveries of previously unknown areas containing hazardous waste (including asbestos containing material) and/or serpentine rocks	B. Immediately following discovery of unknown areas containing hazardous waste (including asbestos containing material) and/or serpentine rocks.

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	 Construction projects that will disturb more than one acre of asbestos containing material, as defined in accordance with California Code of Regulations Title 17, Section 93000, shall prepare and obtain BAAQMD approval for an asbestos dust mitigation plan. The plan shall specify how the operation will minimize emissions and must address specific emission sources. Construction projects that will disturb less than one acre of asbestos containing material, as defined in accordance with California Code of Regulations Title 17, Section 93000, shall comply with applicable BAAQMD regulations. 	For projects disturbing more than one acre of asbestos containing material, PG&E and/or its contractor(s) to prepare an asbestos dust mitigation plan and submit to the CPUC. For projects disturbing less than one acre, PG&E shall comply with applicable BAAQMD regulations.	For projects disturbing more than one acre, PG&E and/or its contractor(s) to attain approval of asbestos dust mitigation plan from BAAQMD and submit final approval to the CPUC	One month prior to and during construction
	 Removal of any asbestos containing materials shall be performed by a CAL-OSHA certified, licensed asbestos abatement contractor in accordance with California Code of Regulations, Title 8, Section 1529 	PG&E and/or its contractor(s) to contract, on an on-call basis, a CAL-OSHA-certified, licensed asbestos abatement contractor for removal of any asbestos- containing materials	A. PG&E and/or its contractor(s) to submit the contact information of the CAL-OSHA certified, licensed asbestos abatement contractor to the CPUC.	A. One week prior to construction
			B. If material containing asbestos is removed, PG&E and/or its contractor(s) must submit written documentation of removal including the date of removal, and quantity removed. CPUC	B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	If structures are disturbed containing asbestos and the material becomes friable, removal of friable materials with a concentration of one percent or greater and at a quantity of 160 square feet or 260 linear feet or greater shall require notification to the Regional EPA National Emission Standards for Hazardous	PG&E and/or its contractor(s) to contract, on an on-call basis, a CAL-OSHA-certified, licensed asbestos abatement contractor for removal of any asbestos- containing materials	A. PG&E and/or its contractor(s) to submit the contact information of the CAL-OSHA certified, licensed asbestos abatement contractor to the CPUC.	A. Prior to and during all phases of construction
	Air Pollutants (NESHAP) office and BAAQMD.		B. If material containing asbestos is removed, PG&E and/or its contractor(s) must submit written documentation of removal including the date of removal, and quantity removed to the CPUC	B. During all phases of construction
			C. If removal of friable material with a concentration of one percent or greater and at a quantity of 160 square feet or 260 linear feet or greater is necessary, PG&E and/or its contractor(s) must notify the Regional EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) office, BAAQMD, and the CPUC	C. During all phases of construction
	 All handling and disposal of hazardous materials and wastes shall be done in compliance with applicable regulatory requirements including, but not limited to, those administered by U.S. EPA, BAAQMD, Department of Toxic Substances Control (DTSC), SF Bay Regional Water Quality Control Board, and Cal OSHA 	PG&E and/or its contractor(s) to contract with a certified contractor/ solid water facility for all the handling and disposal of all toxic materials.	PG&E and/or its contractor(s) to submit the name of the certified solid waste facility to be used to the CPUC.	One week prior to start of construction

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	Additionally, Mitigation Measure LUP-1, provided in Section 2.9 <i>Land Use</i> , shall be implemented to minimize impacts to sensitive receptors.	See LUP-1	See LUP-1	See LUP-1
Biological Resources				
No significant impacts anticipated for biological resources.				
Cultural Resources				
CR-1: Project construction could result in the disturbance of unknown buried prehistoric cultural resources and/or potential historic contents in artificial fill material along the project route.	CR-1a: Pursuant to CEQA Guidelines 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" shall be instituted. The mitigation monitor shall be on-site during all ground disturbing activities to watch for potential discoveries. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and PG&E shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of PG&E and the qualified archaeologist shall meet to determine the appropriate course of action. All significant		A. PG&E to submit contact information and qualification of trained archeological or paleontological expert to CPUC for approval. B. PG&E and/or its contractor(s) to provide immediate verbal notification to the archeological or paleontological expert and the CPUC of any discovered cultural resources.	A. Prior to start of construction B. Immediately upon discovery
	cultural resource materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.		C. CPUC mitigation monitor to inspect compliance at least once weekly	C. During all phases of construction requiring trenching activities

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	CR-1b: PG&E shall notify a qualified paleontologist of any unanticipated discoveries made by either the cultural resources monitor or construction personnel and subsequently document the discovery as needed. In the event of an unanticipated discovery of a breas, or seeps of natural petroleum that trapped extinct animals and	PG&E and/or its contractor(s) to implement measure as defined; noting CR-1a requiring work that within 50 feet of the discovered resource must stop.	A. PG&E to submit contact information and qualifications of the paleontologist to be notified of any unanticipated discoveries during construction	A. Prior to start of construction
	preserved and fossilized their remains, and/or trace fossil during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find.		B. PG&E and/or its contractor(s) to provide immediate verbal notification to the paleontologist and the CPUC of any discovered cultural resources; with follow up written documentation noting date of discovery, type of discovery and actions taken to protect the resource(s).	B. Immediately upon discovery
			C. CPUC mitigation monitor to monitor compliance	C. During all phases of construction
	CR-1c: Prior to the initiation of construction or ground-disturbance, all construction personnel shall be trained on the potential for exposing subsurface cultural resources. The training shall provide information on the procedures to be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E and/or its contractor(s) to submit a description of the training including a list of the best management practices proposed for the project.	A. Prior to and during all phases of construction
			B. PG&E shall submit copies of sign-in sheets from the training session(s) to CPUC to verify compliance	B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	CR-1d: Upon discovery of possible buried cultural materials (including potential Native American skeletal remains), work in the immediate area of the find shall be halted and the monitor shall be notified. Once the find has been identified and evaluated, a qualified archaeologist shall make the necessary plans for treatment of the find and mitigation of impacts if the find is determined to be significant as defined by the California Environmental Quality Act. PG&E will comply with all State laws in the event of the exposure of Native American skeletal remains.	PG&E and/or its contractor(s) to implement measure as defined; noting CR-1a requiring work that within 50 feet of the discovered resource must stop.	A. PG&E and/or its contractor(s) to provide immediate verbal notification to the CPUC of any discovered cultural resources; with follow up written documentation noting date of discovery, type of discovery and actions taken to protect the resource(s). B. CPUC mitigation monitor to monitor compliance	A. Immediately upon discovery B. During all phases of construction
CR-2: Project construction could result in the discovery and disturbance of unknown human remains.	CR-2: In the event of the discovery of human remains, measures shall be followed pursuant to CEQA Guidelines 15064.5 (e) (1).	PG&E and/or its contractor(s) to implement measure as defined; noting CR-1a requiring work that within 50 feet of the discovered resource must stop.	A. PG&E and/or its contractor(s) to provide immediate verbal notification to the City of San Francisco Coroner and the CPUC of any discovered human remains; with follow up written documentation noting date of discovery, type of discovery and actions taken to protect the resource(s). B. CPUC mitigation monitor to monitor compliance	A. Immediately upon discovery B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:	Continuation of CR-2		
	(A) The City of San Francisco Coroner shall be contacted to determine that no investigation of the cause of death is required, and			
	(B) If the Coroner determines the remains to be Native American:			
	The Coroner shall contact the Native American Heritage Commission within 24 hours.	Continuation of CR-2		
	 The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. 			
	3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.			

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
Geology, Soils, and Seismicity				
GEO-1: Structural damage could occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.	GEO-1: A site-specific, design level geotechnical investigation shall be performed to assess the extent and consequence of the expansive soils. The sub grade shall be prepared and foundations constructed as recommended in the investigation to limit the impact due to expansive soils to less than significant. Recommendations and conclusions determined by a registered geotechnical engineer or qualified civil engineer shall be incorporated in the final design as part of the project. The design measures selected to mitigate expansive soil hazards shall be submitted to and approved by PG&E and the CPUC.	PG&E and/or its contractor(s) to implement measure as defined	PG&E and/or its contractor(s) to submit geotechnical investigation and selected measures to the CPUC for review and approval	Submit to CPUC two weeks prior to start of construction
result in increased erosion, especially in	GEO-2: During construction and grading, erosion and sediment control measures shall be conducted in accordance with best management practices for the reduction of pollutants in runoff (refer to Section 2.8, <i>Hydrology and Water Quality</i>). The components of the proposed project would be subject to NPDES requirements and would require the acquisition of a NPDES general construction permit. Erosion of soil materials to local waterways and its affects on water quality are further discussed in Section 2.8, <i>Hydrology and Water Quality</i> . Best management practices for sediment and dust control shall be implemented to limit the impact due to erosion to a less than significant level. Best management erosion control measures shall also be implemented in unpaved areas, including the property between Cesar Chavez and Marin Streets.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E and/or its contractor(s) to acquire NPDES general construction permit. PG&E to submit NPDES general construction permit to the CPUC B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Submit to final permit to CPUC two weeks prior to start of construction B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
GEO-3: The proposed project could be adversely affected by differential settlement, fault rupture, liquefaction, and seismic-related ground failure.	GEO-3: A site-specific, design level geotechnical investigation, shall be performed to assess the potential for liquefaction and seismic-related ground failure in susceptible areas along the selected project route. The duct bank and vaults shall be designed to accommodate or mitigate the effects of ground settlement and loss of foundation bearing strength in the event of an earthquake. A geotechnical assessment of the rail crossings at Third and 23rd Streets, Third and Evans Avenue, and Evans Avenue and Quint Street, shall be performed to ensure that the boring alignment and bore casing design appropriately address and minimize the impact of liquefaction. Recommendations and conclusions determined by a registered geotechnical engineer or qualified civil engineer shall be incorporated in the final design as part of the project. PG&E shall submit the design measures selected to mitigate liquefaction to the CPUC for review and approval.	PG&E and/or its contractor(s) to implement measure as defined	Submit geotechnical investigation and selected design measures to the CPUC for review and approval	Submit to CPUC two weeks prior to start of construction
GEO-4: The proposed project is in an area underlain by artificial fill, which could be susceptible to earthquake-induced settlement.	GEO-4: A site-specific, design level geotechnical investigation shall be performed to assess the extent and consequence of ground instability. The duct bank, vaults, and substation structures shall be designed to accommodate or mitigate the effects of ground settlement and loss of foundation bearing strength in the event of an earthquake. Recommendations and conclusions determined by a registered geotechnical engineer or qualified civil engineer shall be incorporated in the final design as part of the project. PG&E shall submit the design measures selected to mitigate ground instability hazards to the CPUC for review and approval.	PG&E and/or its contractor(s) to implement measure as defined	Submit geotechnical investigation and selected design measures to the CPUC for review and approval	Submit to CPUC two weeks prior to start of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
GEO-5: The proposed project could be susceptible to ground shaking effects in the event of an earthquake.	GEO-5a: Switchyard components, new substation equipment, structures and foundations shall be procured and designed in accordance with PG&E's engineering practices, which include the application of seismic design provisions (e.g., the Institute of Electrical and Electronic Engineers (IEEE) 693 for selected critical equipment, the current edition of the California Building Code (CBC), and various industry standards) intended to mitigate earthquake damage to substation equipment and structures. The design criteria selected to mitigate ground shaking hazards shall be submitted to and approved by PG&E and the CPUC.	PG&E and/or its contractor(s) to implement measure as defined	PG&E and/or its contractor(s) to submit design criteria to the CPUC for approval	Submit to CPUC two weeks prior to start of construction
Hazards and Hazardous Materials				
HAZ-1: Construction excavation could encounter contaminated materials, causing an increase in risk of exposure of hazardous materials to humans and the environment. In addition, construction activities requiring the use of hazardous materials may increase the	enforcement of contractual obligations, that all		A. PG&E and/or its contractor(s) to acquire NPDES general construction permit and subsequently submit permit to the CPUC.	A. Submit to final permit to CPUC two weeks prior to start of construction
risk of exposure to hazardous materials.	RWQCB, San Francisco Department of Public Health, and the local fire department. PG&E shall also ensure that all contractors control the source of any leak and immediately contain any spill utilizing appropriate spill containment and countermeasures. If required by any regulatory agency, contaminated media shall be collected and disposed of at an off-site facility approved to accept such media. In addition, all precautions required by the RWQCB-issued National Pollution Discharge Elimination System (NPDES) construction activity storm water permits shall be taken to ensure that no hazardous materials enter any storm drains or nearby waterways.		B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	HAZ-1b: PG&E shall implement all development requirements within the area regulated under San Francisco's Maher Ordinance, which include soil sampling and analysis for specific inorganic and organic chemicals. PG&E shall also implement its specific protocol for subsurface soil sampling and testing for contaminated soils during construction activities. In addition to the requirements of the Maher Ordinance and PG&E's protocols, the following mitigation measures shall be implemented to ensure that impacts regarding the potential to expose the public, workers, and the environment to contaminated soil, surface, and/or groundwater along the proposed route would remain less than significant.	PG&E and/or its contractor(s) to implement measure as defined	A. CPUC mitigation monitor to inspect compliance at least once weekly B. CPUC to submit documentation, including but not limited to, laboratory test results to verify compliance with all development requirements within the area regulated under the Maher Ordinance	A. During all phases of construction B. Within one month of completion of construction
	● Hazardous Substance Control and Emergency Response Plan — PG&E shall prepare a Hazardous Substance Control and Emergency Response Plan (the Plan) for the project and implement it during project construction. The Plan shall prescribe hazardous material handling procedures to reduce the potential for a spill during construction, or exposure of the workers or public to hazardous materials. The Plan shall also include a discussion of appropriate response actions in the event that hazardous materials are released or encountered during excavation activities. In addition, the Plan shall include proposed methodologies for tracking and managing excavation materials, including asphalt, concrete, debris, and soil. Details on dust control, runoff control, tarping, and air monitoring (of the trench and temporary excavated materials storage areas) shall be included in the Plan. PG&E shall submit the Plan to the Hazardous Material Unified Program Agency, or another appropriate oversight agency, for review and approval prior to initiating any project-related excavation activities.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E to submit the Plan to the Hazardous Material Unified Program Agency and the CPUC for review and approval. B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Submit to final plan to CPUC two weeks prior to start of construction B. During all phases of construction

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	• Health and Safety Plan – PG&E shall prepare and implement a Health and Safety Plan to ensure the health and safety of construction workers and the public during project construction. The Plan shall include information on the appropriate personal protective equipment to be used during excavation activities and material loading, testing, and disposal.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E to submit the Plan to the CPUC for review and approval. B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Submit to final plan to CPUC two weeks prior to start of construction B. During all phases of construction
	Stormwater Pollution Prevention Plan – PG&E shall prepare a Stormwater Pollution Prevention Plan (SWPPP) for the proposed project to be implemented during construction. The SWPPP shall contain information on engineering controls to minimize turbid stormwater runoff or the acceleration of sedimentation rates.	PG&E and/or its contractor(s) develop a SWPPP	A. PG&E and/or its contractor(s) to obtain necessary permit from the RWQCB B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Submit to final permit to CPUC two weeks prior to start of construction B. During all phases of construction
	• Environmental Training Program – PG&E shall ensure that an environmental training program is established and implemented to communicate environmental concerns and appropriate work practices to all construction field personnel. The training program shall emphasize site-specific physical conditions to improve hazard prevention and shall include a review of the Health and Safety Plan, Hazardous Substance Control and Emergency Response Plan, and the SWPPP.		A. PG&E and/or its contractor(s) to submit a description of the training. B. PG&E shall submit copies of sign-in sheets from the training session(s) to CPUC to verify compliance	A. Two weeks prior to construction B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	Emergency Spill Supplies and Equipment – PG&E shall ensure that oil-absorbent material, tarps, and storage drums are used to contain and control any minor releases. Emergency spill supplies and equipment shall be kept adjacent to all areas of work and in staging areas and shall be clearly marked. Detailed	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E shall submit the Plan to the City of San Francisco Hazardous Material Unified Program Agency and the CPUC for review and approval.	A. Submit to final plan to CPUC two weeks prior to start of construction
	information for responding to accidental spills and for handling any resulting released hazardous materials shall be provided in the proposed project's Hazardous Substance Control and Emergency Response Plan, which shall be implemented during construction.		B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction
	ensure that a trained environmental monitor be present during all proposed project excavation activities. The monitor shall be equipped with	contract with a trained environmental monitor required to be present during all	PG&E to submit contact information and qualification of trained environmental monitor to CPUC for approval.	One week prior to start of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	● Storage, Testing, and Disposal of Excavated Materials and Groundwater − PG&E shall ensure that excavated materials are handled, stored and disposed in accordance to applicable regulations. If excavated materials are temporarily stored, they shall be placed on plastic sheeting, moistened to control dust, and covered in a manner to prevent runoff of turbid or contaminated stormwater. Analyses to determine the presence of hazardous materials in material to be disposed of shall be performed by EPA certified laboratories to comply with the requirements of the receiving landfill. PG&E shall ensure that all contaminated soils are disposed of at either a Class I or Class II landfill, depending on the extent of hazardous materials contamination in the soils. Laboratory test reports shall be used to determine the proper handling, transport, and disposal methods.	implement measure as defined, contract with an EPA certified laboratory to provide laboratory testing to determine the presence of hazardous materials in material to be disposed of to comply with the requirements of the receiving landfill (either Class I or Class	A. PG&E to submit a report to the CPUC containing the following information: contact information of the EPA certified laboratory(ies) to be used, laboratory test reports, date of material removal, quantity of material removed, and landfill used for disposal of materials. B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Submit contact information prior to start of construction; report within three weeks after completion of construction B. During all phases of construction
	If groundwater is encountered in the excavation trenches, it shall be contained in Baker tanks and tested for turbidity and potential contaminants prior to being disposed of in accordance with local regulations. Non- contaminated groundwater shall be released to the stormwater conveyance system (with prior approval).	PG&E and/or its contractor(s) to implement measure as defined	PG&E and/or its contractor(s) to attain necessary NPDES from the RWQCB and necessary permits from the City of San Francisco	Submit to final permit to CPUC two weeks prior to start of construction
	Additionally, Mitigation Measure LUP-1, provided in Section 2.9 <i>Land Use</i> , shall be implemented to minimize impacts to sensitive receptors.	See LUP-1	See LUP-1	See LUP-1

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
Hydrology and Water Quality				
HYD-1: The proposed project could result in adverse impacts to groundwater quality.	HYD-1: After installation of the duct bank, it shall be surrounded approved ¹ native backfill or with concrete. If concrete is used, the trench shall be filled with fluidized thermal backfill, a blend of sand, gravel, fly ash, and cement above the duct bank. Because the permeability of these materials is low, a section of drainpipe shall be laid across the trench directly above the concrete at approximately 100-foot intervals to allow groundwater to pass through these materials. Alternatively, gravel drains or other drainage measures may be installed across the cable line.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
Land Use, Plans, and Policies				
	LUP-1: PG&E shall move the segment of the proposed project route from 25th Street between Tennessee and Minnesota Streets and Minnesota Street between 25th and Cesar Chavez Streets to instead continue down Tennessee Street from 25th Street to Cesar Chavez Streets and then travel east along Cesar Chavez Street.		PG&E to submit revised plans showing new project alignment to CPUC for review and approval	Submit to final plan to CPUC two weeks prior to start of construction
Mineral Resources				
No significant impacts anticipated for mineral resources.				
Noise				
NOI-1: Construction activities would intermittently and temporarily generate noise levels above existing ambient levels in the project vicinity.	NOI-1: PG&E shall ensure that the following construction noise mitigation measures are implemented.			

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¹ Backfill will be tested per Mitigation Measure HAZ-1b to determine if hazards exist, and to assure the material is classified as potential backfill. If the material complies with all standards and is classified as potential backfill it is considered approved for use as such.

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	Intake and exhaust mufflers recommended by the manufacturers will be installed on impact tools and equipment.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to periodically inspect equipment	Prior to and during construction
	• All equipment used on the project shall be muffled and maintained in good operating condition. All internal combustion engine-driven equipment shall be fitted with intake and exhaust mufflers which are in good condition.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect equipment	Prior to start of construction
	• Construction contractors shall locate fixed construction equipment such as compressors as far as possible from noise-sensitive receptors during construction.	PG&E and/or its contractor(s) to implement measure as defined	CPUC mitigation monitor to inspect compliance at least once weekly	During all phases of construction
	• Construction hours shall be limited to between the hours of 7:00 a.m. and 8:00 p.m. in areas where residential receptors exist within 100 feet of construction or in accordance with the specific requirements of the excavation permit issued by the City of San Francisco.	PG&E and/or its contractor(s) shall setup a phone noise complaint line and notify, in writing, residents within 300 feet of the project site, who to contact should any observed noise violations occur	A. PG&E to notify the CPUC if/when complaints are received within 24 hours of receipt of noise complaint B. CPUC mitigation monitor to	A. Prior to start of construction and during all phases of construction for complaints received B. During all phases of
			inspect compliance at least once weekly	construction where residential receptors exist within 100 feet of construction
	 Pavement breakers and jack hammerers shall be equipped with acoustically attenuated shields or shrouds recommended by the manufacturers. 	PG&E and/or its contractor(s) to implement measure as defined	A. CPUC mitigation monitor to inspect equipment	A. Prior to start of construction
			B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction
	Additionally, Mitigation Measure LUP-1, provided in Section 2.9 <i>Land Use</i> , shall be implemented to minimize impacts to sensitive receptors.	See LUP-1	See LUP-1	See LUP-1

ENVIRONMENTAL IMPACT	Mitigation Measure/	Tumlementing Astions	Monitoring/Reporting	Manitanina Cabadula
ENVIRONMENTAL IMPACT	Applicant Proposed Measure	Implementing Actions	Requirement	Monitoring Schedule
NOI-2 Project construction could result in adverse impacts to nearby receptors due to excessive construction vibration.	NOI-2 PG&E shall ensure that the following construction vibration mitigation measures are implemented.			
	Vibratory drivers instead of conventional pile drivers shall be used where feasible and effective in reducing vibration and noise impacts from shoring of jack-pit and thrust-block excavations in close proximity to sensitive receptors.	PG&E and/or its contractor(s) to implement measure as defined	A. CPUC mitigation monitor to inspect equipment B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Prior to start of construction B. During all phases of construction
	Additionally, Mitigation Measure LUP-1, provided in Section 2.9 <i>Land Use</i> , shall be implemented to minimize impacts to sensitive receptors.	See LUP-1	See LUP-1	See LUP-1
Population and Housing				
PH-1: Construction activities would result in the temporary displacement of the homeless population that currently resides along the proposed project route.		PG&E and/or its contractor(s) to implement measure as defined	PG&E to submit written summary of discussion with Mayor's Office on Homelessness to the CPUC	Prior to start of construction
Public Services				
PS-1: The proposed facilities could be subject to vandalism and/or terrorism.	PS-1: All manhole covers installed as part of the proposed project shall be consistent with PG&E standard manhole covers. Each manhole cover shall weigh at least 350 pounds or the covers shall be bolted to the manhole frame at four locations using a stainless steel pent-head bolt whenever the manhole is not in use.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E to submit plans showing locations of manholes.B. CPUC mitigation monitor to inspect compliance	A. Submit final plans to CPUC two weeks prior to start of construction B. After construction has been completed

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
PS-2: Project construction activities would result in the temporary closure and/or restriction of some parks, including the Bay Trail.	PS-2a: PG&E shall coordinate with the City and County of San Francisco Park and Recreation Department and the Association of Bay Area Governments' Bay Trail staff prior to closure and/or restriction of park and recreation facilities.	PG&E and/or its contractor(s) to implement measure as defined	PG&E to submit written summary of discussion with City and County of San Francisco Park and Recreation Department and the Association of Bay Area Governments' Bay Trail staff to the CPUC	Prior to start of construction
	PS-2b: Park facilities, including the Bay Trail along Illinois Street between 22nd and 23rd Streets shall not be closed and/or restricted for a period of time exceeding two consecutive weeks unless there are extenuating circumstances.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E to submit a construction schedule identifying estimated periods of closure of the identified Bay Trail segment	A. Prior to start of construction
			B. CPUC mitigation monitor to inspect compliance	B. During all phases of construction
Recreation				
No significant impacts anticipated for recreation.				
Transportation / Traffic				
TRA-1: Project construction within existing streets would reduce the number of, or the available width of, travel lanes on roads, resulting in temporary disruption of traffic flows and increases in traffic congestion.	TRA-1a: PG&E shall obtain and comply with local and state road encroachment permits, and railroad encroachment permits.		PG&E and/or its contractor(s) to attain, comply with, and submit acquired permits to the CPUC	Attain and submit permits to the CPUC two weeks prior to start of construction Comply with permits during all phases of construction
	TRA-1b: PG&E shall implement the following transportation/traffic measures.			

ENVIRONMENTAL IMPACT	Mitigation Measure/ Applicant Proposed Measure	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	PG&E shall prepare and implement a Traffic Management Plan. PG&E shall submit the Plan to the City and County of San Francisco for review and approval prior to construction. The plan shall:	PG&E and/or its contractor(s) to implement measure as defined	A. CPUC to review and approve submitted Traffic Management Plan B. CPUC mitigation monitor to inspect compliance at least once weekly	A. Submit to final plan to CPUC two weeks prior to start of construction B. During all phases of construction
	 include a discussion of work hours, haul routes, limits on the lengths of open trench, work area delineation, traffic control and flagging; identify all access and parking restrictions and signage requirements; 	Continuation of TRA-1b		
	 layout a plan for notifications and a process for communicating with affected residents and businesses prior to the start of construction. Advance public notification would include postings of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access points/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints; 	Continuation of TRA-1b		

ENVIRONMENTAL IMPACT	Mitigation Measure/	Tourism and in a Astiona	Monitoring/Reporting	Manitarina Cabadala
ENVIRONMENTAL IMPACT	Applicant Proposed Measure	Implementing Actions	Requirement	Monitoring Schedule
	 include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times; 	Continuation of TRA-1b		
	 include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access; 	Continuation of TRA-1b		
	 specify the street restoration requirements pursuant to PG&E's franchise agreements with the City and County of San Francisco; 	Continuation of TRA-1b		
	 discuss temporary pedestrian, wheelchair, and bicycle access through detours or safe areas along the construction zone, where construction shall result in the temporary closure of sidewalks or bike lanes. These areas shall be delineated and signed. 	Continuation of TRA-1b		
	PG&E shall identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling or night construction) would be used to minimize impacts to traffic flow.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E and/or its contractor(s) to submit report identifying information required in the mitigation measure to the CPUC to review and approve.	A. Submit to CPUC two weeks prior to start of construction
			B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	PG&E shall develop circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E and/or its contractor(s) to submit circulation and detour plans to the CPUC to review and approve.	A. Submit to final plans to CPUC two weeks prior to start of construction
			B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction
	PG&E shall consult with San Francisco Muni at least one month prior to construction to coordinate bus stop relocations (as necessary) and to reduce potential interruption of transit service.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E and/or its contractor(s) to submit plans to reduce potential interruption of transit service to the CPUC to review and approve.	A. Submit to final plans to CPUC two weeks prior to start of construction
			B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction
	PG&E shall coordinate with the City and County of San Francisco, San Francisco Muni, the Port of San Francisco, and any other appropriate entity, regarding measures to minimize the cumulative effect of simultaneous construction activities in overlapping areas.	PG&E and/or its contractor(s) to implement measure as defined	A. PG&E and/or its contractor(s) to submit plans to minimize the cumulative effect of simultaneous construction activities in overlapping areas to the CPUC to review and approve.	A. Submit to final plan to CPUC two weeks prior to start of construction
			B. CPUC mitigation monitor to inspect compliance at least once weekly	B. During all phases of construction

ENVIRONMENTAL IMPACT	Mitigation Measure/	Implementing Actions	Monitoring/Reporting Requirement	Monitoring Schedule
	Applicant Proposed Measure			
	moratorium is in effect on Cesar Chavez Street (until January 1, 2005) and on 23rd Street (until June 2, 2005), PG&E shall repave and restripe the entire street from curb to curb (not just the area that was trenched).		A. PG&E and/or its contractor(s) to submit waiver to construct during moratorium to the CPUC	A. Prior to start of construction on streets affected by moratorium
			B. PG&E to submit plans to repave and restripe the entire street from curb to curb to the CPUC	B. Two weeks prior to construction on streets affected by moratorium
		B. PG&E and/or its contractor(s) shall repave and restripe the entire street from curb to curb	C. CPUC mitigation monitor to inspect compliance	C. After measure has been completed
TRA-2: Project construction would result in short-term increases in vehicle trips by construction vehicular activities and construction workers.	TRA-2: Implement Mitigation Measures TRA-1 and TRA-1b.	See TRA-a and TRA-1b	See TRA-a and TRA-1b	See TRA-a and TRA-1b
TRA-3: Project construction within roadways and railroad rights-of-way would temporarily increase the potential for accidents.	TRA-3: Implement Mitigation Measures TRA-1 and TRA-1b.	See TRA-a and TRA-1b	See TRA-a and TRA-1b	See TRA-a and TRA-1b
TRA-4: Project construction within or across streets would affect emergency access, and access to local land uses.	TRA-4: Implement Mitigation Measures TRA-1 and TRA-1b.	See TRA-a and TRA-1b	See TRA-a and TRA-1b	See TRA-a and TRA-1b
TRA-5: Project construction could temporarily disrupt bus service along the proposed project route.	TRA-5: Implement Mitigation Measures TRA-1 and TRA-1b.	See TRA-a and TRA-1b	See TRA-a and TRA-1b	See TRA-a and TRA-1b
Utilities and Services				
No significant impacts anticipated for utilities and services.				

(END OF APPEDIX A)